

COMMONWEALTH OF AUSTRALIA

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Family Name						
Given Names						
Student Number						
Teaching Period	Semester 2, 2015					

FINAL EXAMINATION	DURATION
HIT326 – Database-Driven Web Applications	
	Reading Time: 10 minutes
	Writing Time: 120 minutes

INSTRUCTIONS TO CANDIDATES

Read all questions carefully

Answer **ALL** questions using the Answer booklet supplied

EXAM CONDITIONS

This is a RESTRICTED OPEN BOOK examination

No calculators are permitted

One A4 sheet of handwritten double-sided notes permitted

Hard copy, unannotated English translation dictionary only

Answer on the supplied examination material/s only

ADDITIONAL AUTHORISED MATERIALS	EXAMINATION MATERIALS TO BE SUPPLIED
No additional printed material is permitted	1 x 20 Page Book

**THIS EXAMINATION IS PRINTED
DOUBLE-SIDED.**

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Short Answer Questions

Total No of Marks for this section: 10

You should attempt any **FIVE** of the **NINE** questions. Answer only **FIVE** questions. You will not receive additional marks for additional answers. The five lowest marks will determine the result if more than five questions are answered.

Marks for each question are indicated.

Question 1

(Marks: 2)

Briefly describe the CRUD database operations. Draw a table that shows the maps CRUD operations, HTTP requests, SQL commands and PHP array (server) values.

Question 2

(Marks: 2)

Explain the purpose of database transactions in the context of **ACID-compliance**.

Question 3

(Marks: 2)

Discuss the application of “**folksonomies**” in modern web applications.

Question 4

(Marks: 2)

Note: This question has two parts.

Part A

- I. Write three separate lines of PHP code to complete the following tasks in sequence:
Declare the variable myname and assign the number 7 to it.
- II. Declare a second variable called noname and assign the contents of the variable myname to it.
- III. Assign the text 'seven' to the variable myname.

(Mark: 1)

Part B

Consider the following PHP **associative array**.

```
$menu = array();  
$menu["entree"] = "garlic bread";  
$menu["main"] = "porridge";  
$menu["desert"] = "ice cream";  
$menu["drinks"] = "water";  
$menu["back"] = "Linda";
```

Show how you would iterate through this array displaying each key and value.

(Mark: 1)

Question 5**(Marks: 2)**

Discuss the **Model-View-Controller** (MVC) design pattern, and how it can be used to organize application code.

Question 6**(Marks: 2)**

Discuss the **HTTPS** protocol and when it should be implemented in web applications.

Question 7**(Marks: 2)**

Discuss **Prepare** statements and their advantages. Give some example code of an insert function that uses the prepare statement.

Question 8**(Marks: 2)**

Write php code that uses the preg_match function so that it prints 'YES' when a variable \$name contains a string ending in 'Darwin University' and No otherwise.

e.g.

Charles Darwin University

Darwin University

Question 9**(Marks: 2)**

Draw a diagram that describes the Ajax Web application model. Briefly describe the advantage of Ajax application model compared with the traditional HTTP model.

End of Exam Paper